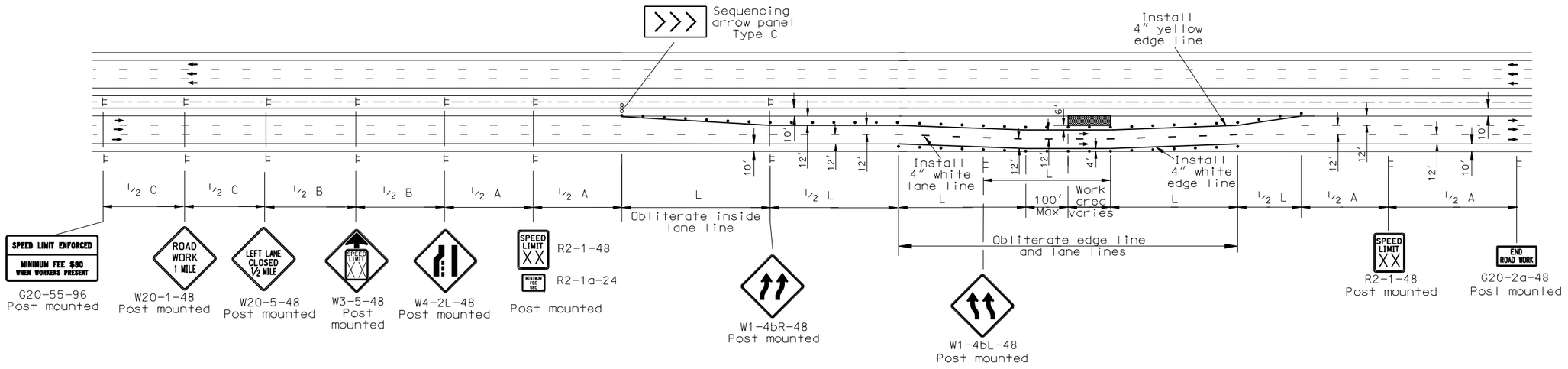
LEFT LANE CLOSURE ON 6 LANE INTERSTATE

D-704-61



Notes

1. Ramps: When the work area encompasses a ramp, install a 40 mph speed limit sign. When the main line 40 mph speed zone is moved past the ramp, remove the ramp speed limit sign.
2. Variables
   S = Numerical value of speed limit or 85th percentile.
   W = The width of taper.
   L = Minimum length of taper, or S x W for freeways, expressways, and all other roads with speeds of 45 mph or greater, or W x $S^2/60$ for urban, residential, and other streets with speeds of 40 mph or less.
3. Delineator drums, and tubular markers used for tapering traffic shall be spaced at the dimension "S". Tubular markers used for tangents shall be spaced at 2 times dimension "S".
4. Sequencing and Flashing Arrow Panels:
   Panels should normally be placed at the beginning of the taper. Where shoulder width does not provide sufficient room, the panel should be moved closer to the work area so that it can be placed on the roadway surface.
   Type A shall be used on roadways with slow moving traffic speeds and low volume (25 mph & 750 ADT or less).
   Type B shall be used on roadways with moderate traffic speeds and volumes (40 mph and 5000 ADT or less).
   Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph and 5000 ADT).
5. The speed limit shall be re-established. The exact speed limit shall be determined in the field, dependent on location and conditions.
6. Existing speed limit signs within a reduced speed zone shall be covered.
7. Obliterated or covered pavement marking shall be paid for as Obliteration of Pavement Marking. The covering shall be approved by the engineer.
8. The reduced speed limit shall be determined dependent on the in place speed limit before construction, unless the design speed of the work zone feature has been reduced below the 10 mph. In this case, the speed limit reduction shall not exceed 30 mph. Where speed limits are to be reduced more than 30 mph, a second speed limit sign shall be installed with the desired speed reduction but shall not exceed 30 mph. The second speed limit sign shall be placed at ½ B.
9. The contractor has the option of using portable sign supports in lieu of post mounted sign as shown on the standard drawings as specified in section 704.03 C.

KEY

Type I barricade	Work area
Type II barricade	Flagger
Type III barricade	Sequencing arrow panel
Sign	Type A delineator or vertical panels back to back
Delineator drum	
Tubular markers	

ADVANCE WARNING SIGN SPACING			
Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

Longitudinal Buffer Space	
*Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

* Posted speed, off-peak 85th percentile speed prior to work starting, or the anticipated operating speed in mph.

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
11-12-02	
REVISIONS	
DATE	CHANGE
07-25-03	Revised R2-1a and W20-1
04-01-04	Revised fee sign, buffer space & warning sign spacing, & note 8
12-01-04	PE Stamp added
06-29-05	Rev. W4-2, Replaced R2-5a with W3-5, Rev. Note 8, Rev. Adv. Warning Table

This document was originally issued and sealed by Mark S Gaydos Registration Number PE-4518, on 06/29/05 and the original document is stored at the North Dakota Department of Transportation